

32. A RF antenna comprising a single conductor arranged in a generally spiral form, and means for connecting the conductor to an antenna feed at or adjacent one end of the conductor, the other end of the conductor being open-circuited, wherein an envelope of the generally spiral form comprises three, four, or five major sides that are markedly non-parallel with each other, the total length of the conductor and the spacing of adjacent co-extending sections being such that the antenna exhibits resonances in a plurality of frequency bands.

33. A RF antenna comprising a single conductor arranged in a generally spiral form, and means for connecting the conductor to an antenna feed at or adjacent one end of the conductor, the other end of the conductor being open-circuited, an envelope of the generally spiral form comprising three major sides disposed so as to lie in a triangular relationship, the total length of the conductor and the spacing of adjacent co-extending sections being such that the antenna exhibits resonances in a plurality of frequency bands.

34. An antenna as in claim 31, wherein an end of each major side merges with an end of an adjoining major side.

35. An antenna as in claim 31, wherein the lengths of and angles between the major sides are such that the antenna is linearly polarized.

36. An antenna as in claim 35, wherein the aspect ratio of an overall envelope of the generally spiral form is chosen such that the antenna has a required ratio of horizontal and vertical polarization.

37. An antenna as in claim 32, wherein an overall envelope of the generally spiral form is substantially in the shape of an equiangular triangle.

38. An antenna as in claim 32, wherein an overall envelope of the generally spiral form is substantially in the shape of an isosceles triangle.

sub 03 > 39. An antenna as in claim 38, wherein, when the antenna is disposed generally upright, a top side of the overall envelope of the spiral form is shorter than the other two sides of the overall envelope.

40. An antenna as in claim 29, wherein co-extensive parts of the spiral form extend generally parallel to each other.

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41. An antenna as in claim 37, wherein, when the antenna is disposed generally upright, from its one end the conductor is adapted to extend upwardly at an angle, then generally horizontally, then generally downwardly at an angle to a point adjacent its one end, thereby forming a first outer side, a top outer side, and a second outer side, respectively, and then to extend upwardly, horizontally, and downwardly within the outer sides to form a first inner side, a top inner side, and a second inner side, respectively.

42. An antenna as in claim 41, wherein the first and top inner sides are each approximately 80% as long as the respective first and top outer sides, and wherein the spacing between the first outer side and first inner side and between the top outer side and the top inner side are each approximately 10% of the length of the first outer side.

43. An antenna as in claim 42, wherein the second inner side is approximately one-third the length of the second outer side.

sub 04 > 44. An antenna as in claim 29, wherein one end of the conductor is an outer end of the spiral form.

45. An antenna as in claim 29, and also comprising a stub antenna extending from the one end of the conductor so as to be alongside an outermost portion of the spiral form, the stub antenna providing a required additional frequency.

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46. An antenna as in claim 41, and also comprising a stub antenna extending from the one end of the conductor so as to be alongside the first outer side.

47. An antenna as in claim 46, wherein the stub antenna is approximately 40% the length of the first outer side.

48. An antenna as in claim 47, wherein spacing of the stub antenna from the first outer side is approximately 10% the length of the stub antenna.

49. An antenna as in claim 48, wherein the antenna has resonant frequencies at approximately 100 MHz and 220 MHz.

50. An antenna as in claim 29, further comprising a ground plane functionally adjacent the conductor.

51. An antenna as in claim 29, in combination with a further antenna, the two antennas being arranged as a dipole.

52. An antenna as in claim 29, mounted on a substrate for attachment to a window or other surface.

53. A window or vehicle body panel or other vehicle fitment comprising an antenna as in claim 1.

54. A window or vehicle body panel or other vehicle fitment as in claim 53, wherein the window or body panel or other vehicle fitment forms a dielectric between the antenna and the ground plane.

55. A method of manufacturing an antenna, comprising disposing or defining a single conductor in a polygonal spiral form with a feed connection at or adjacent one end thereof, and selecting the spacing between adjacent co-extensive sections of the polygonal spiral form or an overall length of the conductor such that the antenna has a plurality of required resonance frequencies.

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